September 29, 2006

Ralph Svetich
DRMS Project Manager
Department of Water Resources

(Submitted electronically to: rsvetich@water.ca.gov)

Dear Mr. Svetich:

We have quickly reviewed the Initial Technical Framework (ITF) papers posted recently to the DWR DRMS web site. We are responding to your request for comments by September 29. You asked that parties address the following questions:

> *Do you see any major shortcomings in the methodologies outlined in the ITFs that need to be addressed?*
> *Are you aware of additional information related to these topics that could be of assistance in conducting the proposed studies?*

We limited our review and comments to the ITF papers on Water Analysis, Economic Consequences, Environmental Risk Assessment, Climate Change, Infrastructure and Risk Analysis. Our comments are organized below by the individual reports.

Water Analysis. For urban water utilities this part of the technical work may be the most critical – at least from a water quality standpoint. Since so much of the work depends on operational assumptions (especially operation of upstream reservoirs), it will be important to document and display the major operational assumptions for the studies. More importantly, it will be very helpful to describe the uncertainties associated with model outputs and put such results into a qualitative as well as the obvious quantitative context. We agree strongly with the paper's observations about the importance of the work of this effort as it relates to the other technical efforts – particularly levee vulnerability, flood hazards and environmental consequences.

Economic Consequences. The proposed methodology appears to be credible and comprehensive. We believe it is essential to accompany any results with some estimate of the level or degree of uncertainty associated with the projected economic consequences to each of the major impact categories. We appreciate the fact that the consultant team will also address potential permanent economic impacts in a qualitative manner, and believe there may be merit in addressing qualitative impacts that may not be permanent but may also be difficult to quantify. We will follow with interest how the consultant team will deal with "economic effects from changed ecological values". The "Urban Water Agencies" discussion is not complete in its description of potentially-impacted entities. This should be carefully coordinated with the infrastructure team, and should include the Contra Costa Water District, EBMUD's Freeport Project diversion, and the City of Stockton's planned Delta Water Supply Project.

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Environmental Risk Assessment. This risk assessment paper is excellent, and is backed by a very solid consultant team. We appreciate the clear statements in the paper regarding the limited state of scientific knowledge of individual species and ecosystem dynamics, and the resulting concern about the ability to evaluate species population-level impacts. It is unclear in the proposed methodology as to the mix of quantitative and qualitative outputs from the risk assessment, and it may not be possible to be more clear about this until the evaluation is nearly complete. We believe it may be important to more explicitly address the impacts to the food web for aquatic species, in addition to entrainment, predation and "habitat quality" listed in the paper.

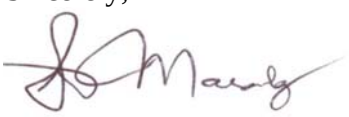
Climate Change. This is a complex area, and we appreciate the team that has been put together and the comprehensive evaluation that will be done. We believe the paper is not clear on time steps of outputs. Although the end products appear to be some form of probabilities associated with water resource impacts from climate change, will this be several "snapshots" over the next century or simply a composite at mid-century and the year 2100? We believe several "snapshots" will be important since water resource impacts of climate change are expected to increase over time, resulting presumably in increasing risk over time. This will ultimately be useful in crafting response strategies, many of which could take decades to implement during which risks are likely to increase.

Infrastructure. It appears that the proposed methodology is very comprehensive, and will be one of the key areas of DRMS and the input to the Delta Vision process initiated by Governor Schwarzenegger yesterday. The list of water infrastructure should include both existing and pending projects. While existing water infrastructure is obvious, pending projects include the Freeport Project intake and the City of Stockton's Delta Water Supply Project. Although we do not offer comments on the methodology, we look forward to the specific list of the Delta's infrastructure assets to be included in the "Current Uses – Trends" report scheduled to be released in October. The proposal to contact consultants, utilities and businesses to address all infrastructure assets is good, and should also include the cities bordering the Delta to make sure existing and planned residential development is adequately represented.

Risk Analysis. Our comments on the other papers are relevant to the outcome of the risk analysis, where the component pieces will come together. This is a well-written paper, and we appreciate the clear description of planned outcomes as well as the section on defining the types and categories of uncertainty.

Thank you for the opportunity to provide comments on these reports.

Sincerely,



Steve Macaulay
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